

In the Claims

Please substitute the following amended claims for those currently pending:

1. (Currently Amended) An interpositional arthroplasty system for use in repairing ginglymus joints such as the joints of the ankle, comprising a tibiotalar implant that provides a first major surface adapted to be positioned against a tibia, the tibia being allowed to articulate across the first major surface, and a second major surface adapted to be positioned against a talus, ~~and/or a talus-calcaneus implant that provides a first major surface adapted to be positioned against a talus and a second major surface adapted to be positioned against a calcaneus.~~

2. (Original) An implant according to claim 1 wherein the tibiotalar implant further comprises one or more external structures adapted to improve retention of the implant within the joint site.

3. (Original) An implant according to claim 2 wherein the structure comprises an integral bead shaped structure proximate its anterior side adapted to cap and thereby engage the neck of the talus.

4. (Original) An implant according to claim 1 wherein the implant comprises a biomaterial.

5. (Original) An implant according to claim 4 wherein the biomaterial is a polyurethane.

6. (Original) An implant according to claim 5 wherein the polyurethane is biocompatible with respect to cytotoxicity, sensitization, genotoxicity, chronic toxicity, and carcinogenicity.

7. (Original) An implant according to claim 5 wherein polyurethane has a Shore hardness of at least about 60 D or less.

8-18. (Canceled)

19. (Original) A method of repairing a ginglymus joint, comprising the steps of providing and implanting according to claim 1.

20. (Original) A ginglymus joint that includes an implant according to claim 1.

21. (Canceled)

22. (Currently Amended) A device for implantation into an ankle joint space within the body of a mammal, the device comprising a composite or monolith structure fabricated from a biocompatible, biodurable material that is adapted to be inserted into the joint compartment, the device including an interpositional tibiotalar implant that provides a first major surface adapted to be positioned against a tibia, the tibia being allowed to articulate across the first major surface, and a second major surface adapted to be positioned against a talus, wherein the implanted device is substantially free of anchoring portions that need to be attached to the bone, cartilage, ligaments or other tissue, yet by its design is capable of being used with minimal translation, rotation, or other undesired movement or dislocation within or from the joint space.

23. (Canceled)

24. (Currently Amended) A device according to claim ~~23~~22 wherein stability of the device within the joint space is provided by the fixation/congruency of the device to the talus, one or the other of the two joint members

25. (New) An interpositional arthroplasty system for use in repairing joints of the ankle, comprising a interpositional tibiotalar implant that provides a first major surface adapted to be positioned against a tibia, the tibia being allowed to articulate across the first major surface, and a second major surface adapted to be positioned against a talus, wherein the implant comprises an integral bead shaped structure proximate its anterior side adapted to cap and thereby engage the neck of the talus to improve fixation to the talus.